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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,134	12/05/2001	Kouichi Anno	HITA.0122	1897

7590 02/13/2003

Stanley P. Fisher  
Reed Smith Hazel & Thomas LLP  
Suite 1400  
3110 Fairview Park Drive  
Falls Church, VA 22042-4503

EXAMINER

DUONG, THOI V

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/002,134

Applicant(s)

ANNO ET AL.

Examiner

Thoi V Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 ~~is/are~~ rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanou et al. (USPN 6,407,784 B1).

As shown in Fig. 3, Kanou discloses a liquid crystal display device 70 comprising:  
a pair of substrates 35A, 35B which are arranged to face each other while inserting liquid crystal 14 therebetween, to respective liquid-crystal-side pixel regions formed on one of the substrates, pixel electrodes 74 which reflect an external light incident through the other substrate are provided, the pixel electrodes are formed such that protruding portions 73 are scattered on surfaces thereof and respective protruding portions are provided in two or more kinds which are different in shape from each other when the pixel electrodes are viewed in a plan view, and the protruding portions formed on the surfaces of the pixel electrodes are formed of island-like multi-layered material layers which are positioned at the lower layer sides of the pixel electrodes,

wherein among the island-like multi-layered material layers, there exist layers which are different in the number of layers (col. 10, lines 28-31);

wherein among the island-like multi-layered material layers, there exist the island-like multi-layered material layers whose respective one layers are different from respective one layers of other island-like multi-layered material layers;

wherein among the respective island-like multi-layered material layers, there exist multilayered material layers whose taper angles provided to the side walls thereof are different from each other as shown in Fig. 11;

wherein the island-like multi-layered material layers are formed of inorganic material (col. 11, lines 4-5) which is identical with material of other constituents elements positioned as layers below the pixel electrodes;

wherein an organic material layer 30 or a sequentially laminated body made of inorganic material and organic material (col. 13, lines 57-59) is inserted between the pixel electrode and the island-like multi-layered material layer;

wherein the liquid crystal display device further includes a plurality of gate signal lines 27 which are formed on the liquid-crystal-side of one substrate, and a plurality of drain signal lines 22, 21 are formed on the liquid-crystal side surface of one substrate such that the drain signal lines intersect the gate signal lines, the pixel regions are regions which are surrounded by the gate signal lines which are arranged close to each other and the drain signal lines which are arranged close to each other, the pixel regions are provided with thin film transistors which are driven with the supply of scanning signals from the gate signal lines at one side, the pixel electrodes 74 receive

video signals from the drain signal lines 21 at one side through thin film transistors, and the island-like multi-layered material layer is formed of a laminated body made of at least two material layers selected from a material layer which is made of material equal to material of the gate signal lines 27, a material layer which is made of material equal to material of gate insulation films 18 of thin film transistors, a material layer which is made of material equal to material of the drain signal lines 22, 21, a material layer which is made of material equal to material of a protective layer 28 which covers the thin film transistors;

wherein each pixel electrode is formed on the whole of each pixel region;

wherein each pixel electrode is formed only above a region where the projections are formed as shown in Fig. 11; and

wherein the protective film includes organic material or a sequentially laminated body made of inorganic material and organic material (col. 11, lines 4-5).

Finally, as shown in Fig. 11, the layer 30, which is a part of each island-like multi-layered material layer, has the center position offset from the center position of the shape of other layers of the protruding portion 73, whereby the respective protruding portions are different in shape when the pixel electrodes are viewed in a plan view.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (703) 308-

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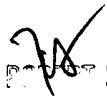
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3171. The examiner can normally be reached on Monday-Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (703) 305-3492.

Thoi Duong

02/07/2003

  
SUPERVISOR  
TECHNICAL CENTER